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EXAMINER
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ROSARIO, DENNIS

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/078,713	<b>Applicant(s)</b> NAMIZUKA, YOSHIYUKI	
	<b>Examiner</b> Dennis Rosario	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-27, 29-40 and 42-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-27, 29-40 and 42-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/19/02, 4/8/02 & 5/25/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment was received on May 25, 2005. Claims 1-13,15-27,29-40 and 42-44 are pending.

### ***Response to Arguments***

2. Applicant's arguments on page 17, last sentence of the first paragraph, filed 5/25/2005 have been fully considered but they are not persuasive and states:

“The Kawamura et al. reference fails to disclose...any information on the right or left relative position of the edge within the image block.”

Regardless if Kawamura et al. teaches the above mentioned statement, the examiner, upon further review of the specification, could not find an explicit definition of what a “right relative position” or a “left relative position” or a “horizontal relative position” or a “vertical relative position” means as described in detail in the 112 rejection section, below.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1, 15, and 29, the claimed "horizontal relative position" and the "vertical relative position" and the "right relative position" and the "left relative position" is the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

What is the claimed right relative position relative to? An edge of a document? Another edge? An edge point? A position? A portion? A left portion? An upper portion? A lower portion? Is the applicant claiming a chain code that describes an edge or contour using vertical, horizontal, right and left relative position where each vertical, horizontal, right and left position is relative to each of the other positions of the outline portion? If the positions are relative to each other, what kind of measure is being using to measure relativity between the positions? Or does the applicant mean using relatedness instead of relativity? If relatedness is actually what the applicant meant then the examiner believes that a difference in a related horizontal position or a difference in a related vertical position or a difference in a related right position or a

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difference in a related left position makes more sense in the context of the specification since a 3 X 3 kernel is commonly used to detect edges that are related in the horizontal, vertical, left, right, diagonal and oblique positions using a difference in characteristics.

The only support for relative position and not right relative position was found in the background of the specification that states:

“The regional differences are based upon the characteristics of the relative location in the image.”

Thus, the examiner interprets the above statement as a difference in characteristics between at least two regional locations where at least one regional location has different characteristics relative to the other characteristics of said two regional locations regardless of any right, left, horizontal or vertical orientation.

Thus, the claimed “vertical, horizontal, right and left relative position” will not be given patentable weight and only the claimed “relative position” will be given patentable weight in the claim rejections, below, since the examiner could not find support for the claimed “vertical relative position” or the “horizontal relative position” or the “right relative position” or the “left relative position.”

If there is support in the specification for at least the claimed “right relative position” please indicate page and line numbers and figures that shows the claimed “right relative position”.

Thus, the respective dependent claims are rejected under 112 first paragraph for depending on the respective rejected parents claim under 112 first paragraph.

### ***Drawings***

5. The drawings of fig. 2 objected to because fig. 2,num. 25: "INTENCITY CORRECTION UNIT" ought to be amended to "INTENSITY CORRECTION UNIT". In addition the correspondence between figures 1,numerals 1-8 and fig. 2 would be better understood by labeling respective portions of fig. 2 with the same numerals of fig. 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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6. The drawing of fig. 3 objected to under 37 CFR 1.83(a) because they fail to show an emphasis filter group, original data pass filter, strong emphasis result, as described in the specification. In addition fig. 3 shows an output arrow from fig. 3,num. 36 and fig. 3,num. 40 that appears to be connected possibly to fig. 5. Please show how fig. 3 is connected to another figure by adding labels to the output arrows that describe the connection to another figure.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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7. The drawing of fig. 3 is objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "35" has been used to designate both FRONT FILTER and INTENSITY PROCESS UNIT.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.



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8. The drawing of fig. 5 are objected to under 37 CFR 1.83(a) because they fail to show how T1 and T2 of fig. 5 is “based upon the edge information” as described in the specification on page 9, lines 21, 22. Note that “EEDGE INFORMATION” of fig. 5 ought to be amended to “EDGE INFORMATION”.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

9. The disclosure is objected to because of the following informalities:

Page 1, line 14: "multifunctional" ought to be amended to "multifunctional technology".

Page 3, line 30: "tables shows" ought to be amended to "tables that show".

Page 5, line 13 "documents, [with a line on top of the comma]" ought to be amended to "document,".

Page 7, lines 17, 19, 22 and 25 has the word "path" which does not correspond to fig. 2, num. 29: VIDEO BUS CONTROL UNIT. Either the specification ought to be amended to "bus" or fig. 2, num. 29 ought to be labeled to VIDEO **PATH** CONTROL UNIT.

Page 8, line 2: "sharpness adjustment unit" ought to be amended to "sharpness adjustment unit 3" that corresponds to fig. 1, num. 3.

Page 8, line 2: "or space filter process unit" ought to be amended to "space filter process unit 24 of fig. 2".

Page 8, line 32, "emphasis filter group unit" appears to be the INTENSITY PROCESS UNIT in fig. 3, num. 35 (used twice). The examiner suggests using one name for one unit and deleting the other name for ease of understanding the specification.

Page 9, line 20, 21: "intensity adjustment process" ought to be amended to "intensity adjustment process 4"

Appropriate correction is required.

***Claim Objections***

10. Page 11 of the claims is shown twice where one of the pages has claim 41 cancelled and the other page 11 has claim 41 not cancelled. The examiner assumes that the page 11 with claim 41 canceled is the correct page 11 and the other page 11 with claim 41 not canceled ought to be omitted since the remaining claims on both pages are identical.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-26,29-39 and 42-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueta et al. (US Patent 5,748,800 A).

Regarding claim 15, Ueta et al. discloses a system of processing image data, comprising the steps of:

a) an image data input unit (fig. 1, num. 43: CCD LINE SENSOR) for inputting image data (fig. 1, num. 43: CCD LINE SENSOR captures an image based upon "user indicat[ion]" or customization in col. 10, lines 34 and 35.);

b) a space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) connected (via numerals 59,44,45) to said image data input unit (fig. 1, num. 43: CCD LINE SENSOR) for determining (fig. 3, num. 77: COMPAR. is a comparator.) whether or not a portion (Fig. 2.num. 43 is a portion of an image.) of the image data (fig. 1, num. 43: CCD LINE SENSOR) is an outline portion (edge portion) to generate an outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data.) including edge information (or "difference" in col. 2, line 21) on relative position (or a "difference between the signals" in col. 2, line 21 where the difference is interpreted as one feature of the difference is different relative to another feature of the difference) of the outline portion in the image data; and

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c) an intensity correction unit or pre-correction unit (fig. 1,num. 45:CCD SIGANL PROCESSOR performs a shading correction in col. 3, lines 35 and 36.) connected (via an arrow between numerals 45 and 46.) to said space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) for selecting a correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) from a set of predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT contains "a preset...coefficient" in col. 4, lines 2-4.) based upon said outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data that is used by fig. 3,num. 79.); and

d) applying the selected correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82.) to the portion (Fig. 2.num. 43 is a portion of an image.) of the image data (fig. 1, num. 43: CCD LINE SENSOR).

Claim 1 is rejected the same as claim 15. Thus, argument similar to that presented above for claim 15 is equally applicable to claim 1, except that claim 1 is directed towards a method.

Regarding claim 2, Ueta discloses the method of processing image data according to claim 1 wherein the image data is scanned (fig. 1, num. 43: CCD LINE SENSOR captures an image based upon "user indicat[ion]" or customization in col. 10, lines 34 and 35.).

Claim 3 is rejected the same as claim 11. Thus, argument similar to that presented above for claim 11 is equally applicable to claim 3.

Regarding claim 4, Ueta et al. discloses the method of processing image data according to claim 1 wherein said correction coefficients (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) include intensity correction coefficients (Fig. 3,num. 49: CONT. COEF. INPUT UNIT contains coefficients for contrast or sharpness that is based on a "shading correction" in col. 3, lines 35 and 36. Thus the contrast coefficients contain a shading value or intensity.).

Claims 5,18 and 19 are rejected the same as claim 4. Thus, argument similar to that presented above for claim 4 is equally applicable to claims 5,18 and 19.

Regarding claim 6, Ueta et al. discloses the method of processing image data according to claim 1 further comprising additional steps of:

a) an operation unit (fig. 1,num. 57:INTERFACE) connected (via numerals 53,52,51 and 50.) to said space filter process unit(Fig. 1,num. 46) for inputting user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) prior (as shown by the arrows in figure 3.) to said selecting step (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.); and

b) selecting said correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) from said set of said predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT) based upon said outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data.) and a combination of said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67 and in inputted to fig. 3,num. 77: COMPAR.).

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Regarding claim 7, Ueta et al. discloses the method of processing image data according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include an intensity notch signal (Fig. 3,num. 48: COMP COEF. INPUT UNIT is a "multi-position switch" in col. 4, lines 1 and 2.).

Regarding claim 8, Ueta discloses the method of processing image data according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include an image type signal (Fig. 3, label "IMAGE SIGNAL").

Regarding claim 9, Ueta discloses the method of processing image data according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include customize data (An image based upon "user indicat[i]on" or customization in col. 10, lines 34 and 35.).

Regarding claim 10, Ueta et al. discloses the method of processing image according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include a background removal signal (Fig. 3,num. 49: CONT. COEF. INPUT UNIT receives an user input for correcting contrast or "suppressing contrast... noise" in the abstract.).

Regarding claim 11, Ueta et al. discloses the method of processing image data according to claim 1 further comprising additional steps of:

- a) further determining an image intensity level (Fig. 1, num. 45: CCD SIGNAL PROCESSOR performs a shading correction in col. 3, lines 34-36.) of the portion (Fig. 2.num. 43 is a portion of an image to be corrected by fig. 1,num. 45: CCD SIGNAL PROCESSOR.) of the image data (fig. 1, num. 43: CCD LINE SENSOR) prior (as shown in fig. 1.) to said applying step (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82 and corresponds to fig. 1,num. 46.); and
- b) selecting said correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) from said set of said predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT) based upon said outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data.) and said image intensity level (Fig. 1, num. 45: CCD SIGNAL PROCESSOR performs a shading correction in col. 3, lines 34-36 and is inputted into fig. 1,num. 46.).

Regarding claim 12, Ueta et al. discloses the method of processing image data according to claim 11 wherein said predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT contains "a preset...coefficient" in col. 4, lines 2-4.) are previously stored in a table (Fig. 1,num. 55: ROM contains "parameters...[that] set the... coefficient...." in col. 10, lines 27-30. Thus, fig. 1,num. 55: ROM generates a preset coefficient based on parameters.).

Claim 16 is rejected the same as claim 2. Thus, argument similar to that presented above for claim 2 is equally applicable to claim 16.



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Regarding claim 17, Ueta discloses the system for processing image data according to claim 16 further comprising a precorrection unit (Fig. 1,num. 45: CCS SIGANL PROCESSOR performs a shading correction in col. 3, lines 34-36) connected to said scanner (fig. 1, num. 43: CCD LINE SENSOR), and said space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) for correcting the scanned image data (fig. 1, num. 43: CCD LINE SENSOR captures an image) to generate preprocessed image data (Output of fig. 1,num. 45) prior to outputting the preprocessed image data to said space filter process unit (fig. 1,num. 46).

Claims 21 and 22 are rejected the same as claim 7. Thus, argument similar to that presented above for claim 7 is equally applicable to claims 21 and 22.

Claim 23 is rejected the same as claim 9. Thus, argument similar to that presented above for claim 9 is equally applicable to claim 23.

Claim 24 is rejected the same as claim 10. Thus, argument similar to that presented above for claim 10 is equally applicable to claim 24.

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Regarding claim 25, Ueta et al. discloses the system for processing image data according to claim 15 wherein

a) said space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) further determines an image intensity level (fig. 1,num. 46 shown in detail in fig. 3 determines an image intensity level at fig. 3,num. 47 based upon a shaded corrected signal from fig. 1,num. 45.) of the portion (Fig. 2.num. 43 is a portion of an image.) of the image data (fig. 1, num. 43: CCD LINE SENSOR) prior (as shown in fig. 1.) to applying (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82 and corresponds to fig. 1,num. 46.) the selected correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82.); and

b) The remaining limitation was rejected in claim 11.

Regarding claim 26, Ueta et al. discloses the system for processing image data according to claim 25 further comprises a storage unit (fig. 3,num. 81: CONT COEF. OUTPUT UNIT stores coefficients.) connected (via numerals 79,77,76,74,75 and 71-73) to said intensity correction unit (Fig. 1,num. 45.) for storing the predetermined correction coefficients in a table format (fig. 3, num. 49: CONT. COEF. INPUT UNIT contains "a preset...coefficient" in col. 4, lines 2-4 that are inputted to storage 81.).

Claim 29 has been addressed in claims 1 and 15 except for the limitation of a storage medium for storing computer readable instructions which are disclosed in Ueta et al. in col. 3, line 60: "programs stored in RAM".).

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Claim 30 is rejected the same as claim 2. Thus, argument similar to that presented above for claim 2 is equally applicable to claim 30.

Claim 31 is rejected the same as claim 3. Thus, argument similar to that presented above for claim 3 is equally applicable to claim 31.

Claims 32 and 33 are rejected the same as claim 4. Thus, argument similar to that presented above for claim 4 is equally applicable to claim 32 and 33.

Claim 34 is rejected the same as claim 7. Thus, argument similar to that presented above for claim 7 is equally applicable to claim 34.

Claim 35 is rejected the same as claim 8. Thus, argument similar to that presented above for claim 8 is equally applicable to claim 35.

Claim 36 is rejected the same as claim 9. Thus, argument similar to that presented above for claim 9 is equally applicable to claim 36.

Claim 37 are rejected the same as claim 10. Thus, argument similar to that presented above for claim 10 is equally applicable to claim 37.

Claim 38 is rejected the same as claim 11. Thus, argument similar to that presented above for claim 11 is equally applicable to claim 38.

Claim 39 is rejected the same as claim 12. Thus, argument similar to that presented above for claim 12 is equally applicable to claim 39.

Claims 42-44 are rejected the same as claims 12 and 25. Thus, argument similar to that presented above for claims 12 and 25 are equally applicable to claims 42-44.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 13, 27 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueta et al. (US Patent 5,748,800 A) in view of Kawamura et al. (US Patent 6,563,537 B1).

Regarding claim 13, Ueta et al. does not teach the limitation of claim 13, but does suggest a scanning direction to obtain an edge as shown in fig. 2 and suggests other methods of obtaining an edge using "relative adjacent elements in a spatial arrangement... (col. 11, lines 3-5)." Thus, a spatial arrangement can contain a direction between two elements.

However, Kawamura et al. teaches the spatial arrangement as suggested by Ueta et al. as shown in fig. 1, label PN1h and a method of processing image data wherein a determining step (fig. 1, label: SECOND JUDGMENT) further determines whether or not an outline portion (Fig. 1, label: PN1h shows an edge) has a particular direction (Fig. 1, label: PN1h shows an edge with a horizontal direction as shown.).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Ueta et al.'s teaching of a scanning direction with Kawamura et al.'s teaching of determining an edge with direction, because Kawamura et al.'s teaching "properly interpolate[es] image signals having various patterns (Kawamura et al., col. 2, lines 65-67)."

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Claims 27 and 40 are rejected the same as claim 13. Thus, argument similar to that presented above for claim 13 is equally applicable to claims 27 and 40.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Naito et al. (US Patent 6,771,832 B1) is pertinent as teaching a method of teaching detecting "a left edge" in col. 9, line 25.

Anzai (US Patent 5,828,818 A) is pertinent as teaching a paper left-right sensor as shown in fig. 1, num. 10.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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